# Photon maps in RenderPark

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# What is RenderPark?

- Physically based rendering software
- Open source for non-commercial uses
- *Research/Educational* tool
  - Comparison between algorithms
  - Quickly try out new algorithms
  - Not a production renderer
- Unix: IRIX, Linux, ...
- C/C++

# RenderPark Algorithms

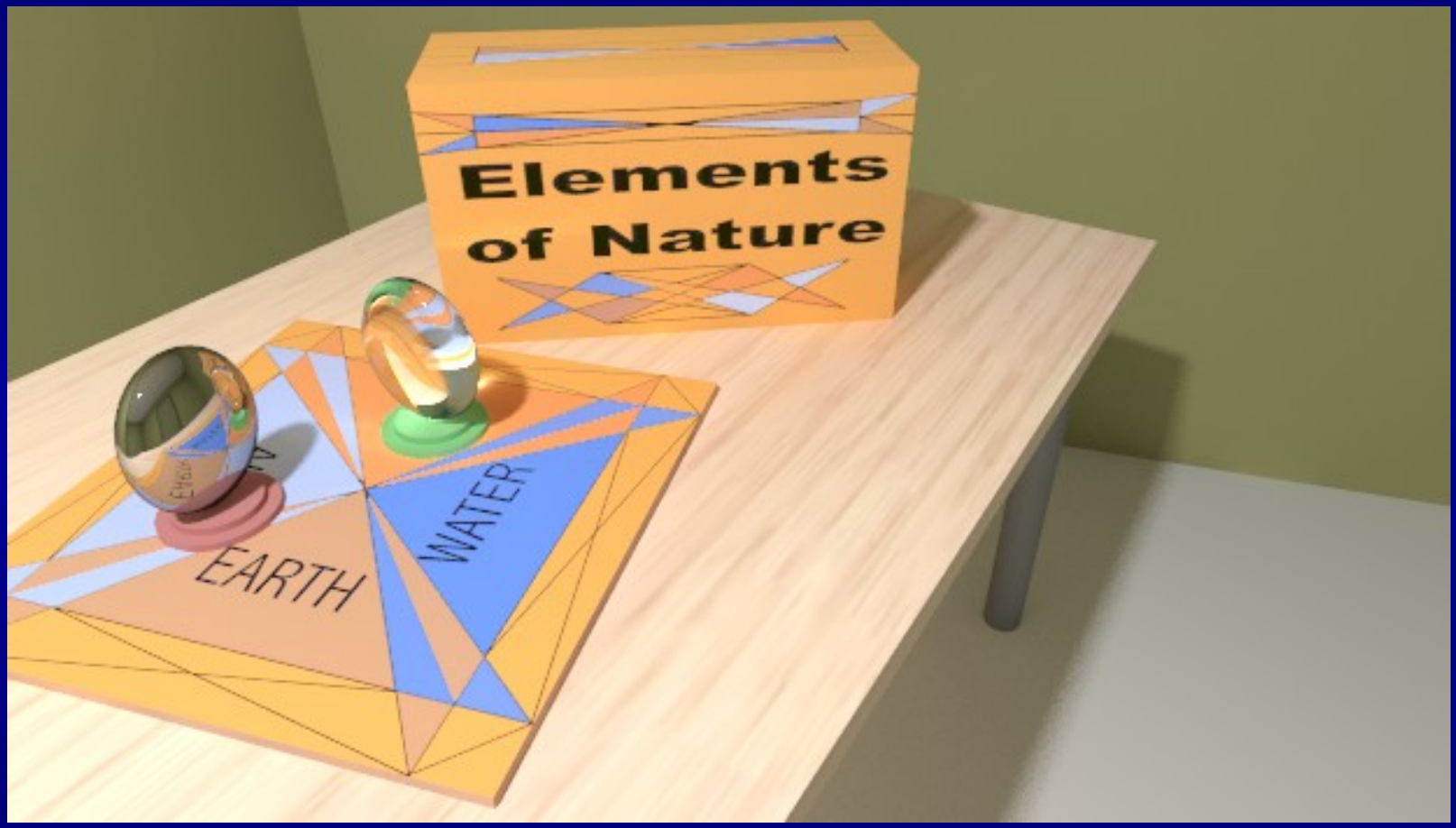
- Stochastic ray tracing
- Bi-directional Path Tracing
- Radiosity
  - Galerkin, Monte Carlo (hierarchical, …)
- Photon Maps
- Multipass algorithms

# Photon Maps in RenderPark

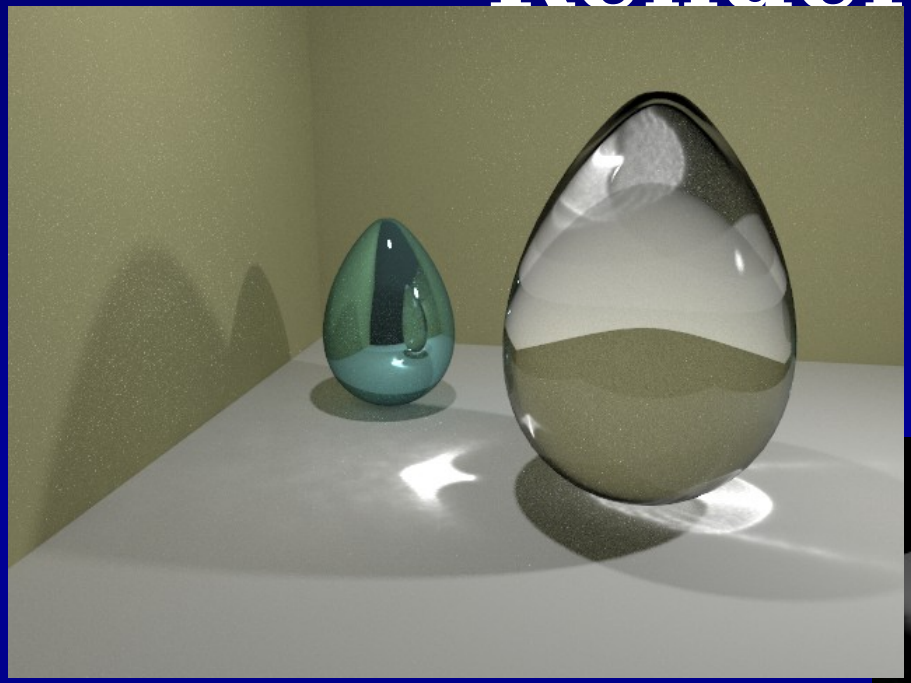
- Caustic & Global (+ experimental volume map)
- Importance driven
- Balanced/Unbalanced kd-trees
- Irradiance precomputation

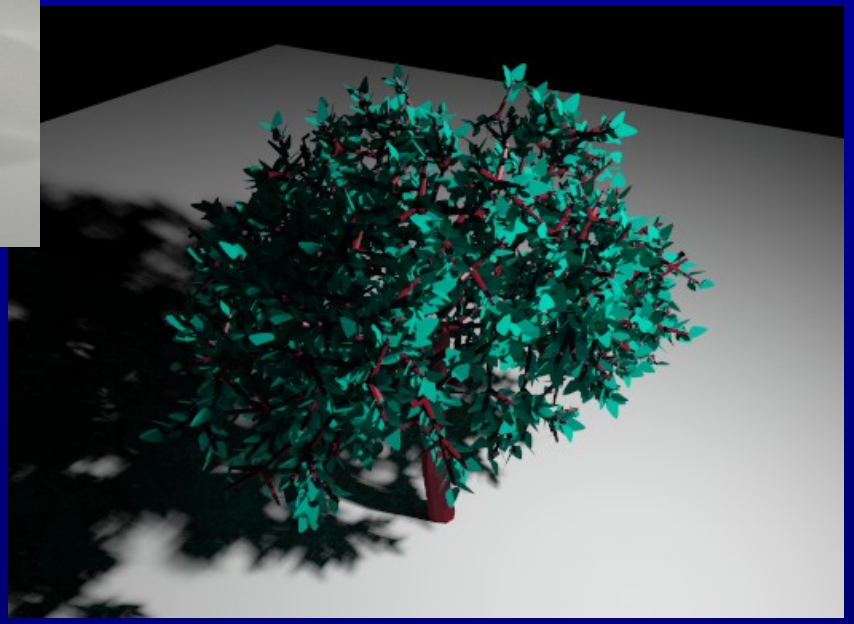
- No irradiance caching in final gather pass

# Photon Maps in RenderPark



# Photon Maps in RenderPark





# Photon Maps in RenderPark

**Glass Knot**

2.5M caustic photons, 200 nearest in reconstr.

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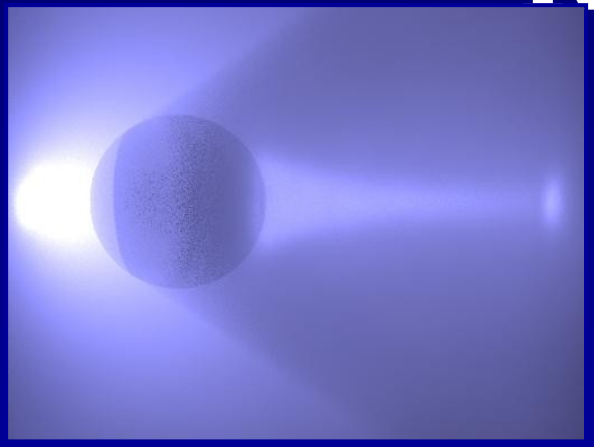

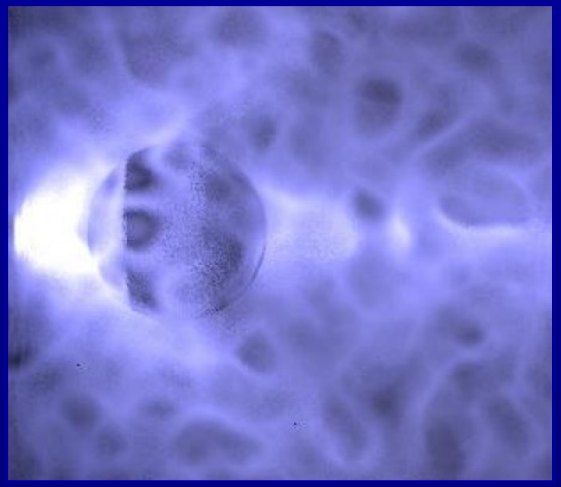

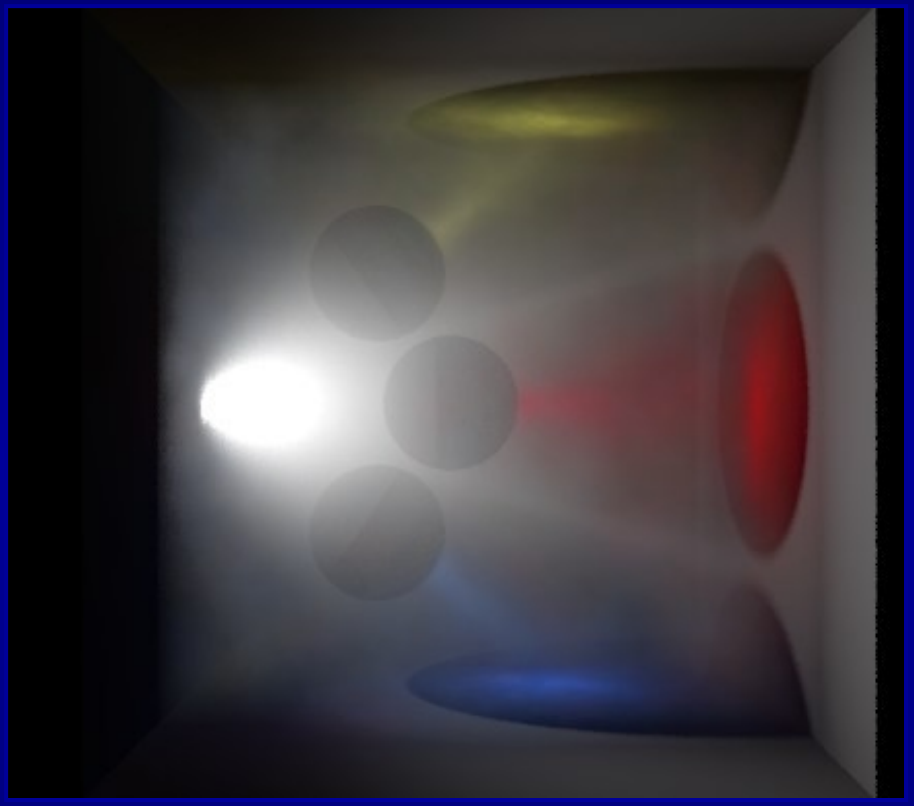

Not yet in public release…

Participating media (F. Anrys, K. vom Berge, 2001)

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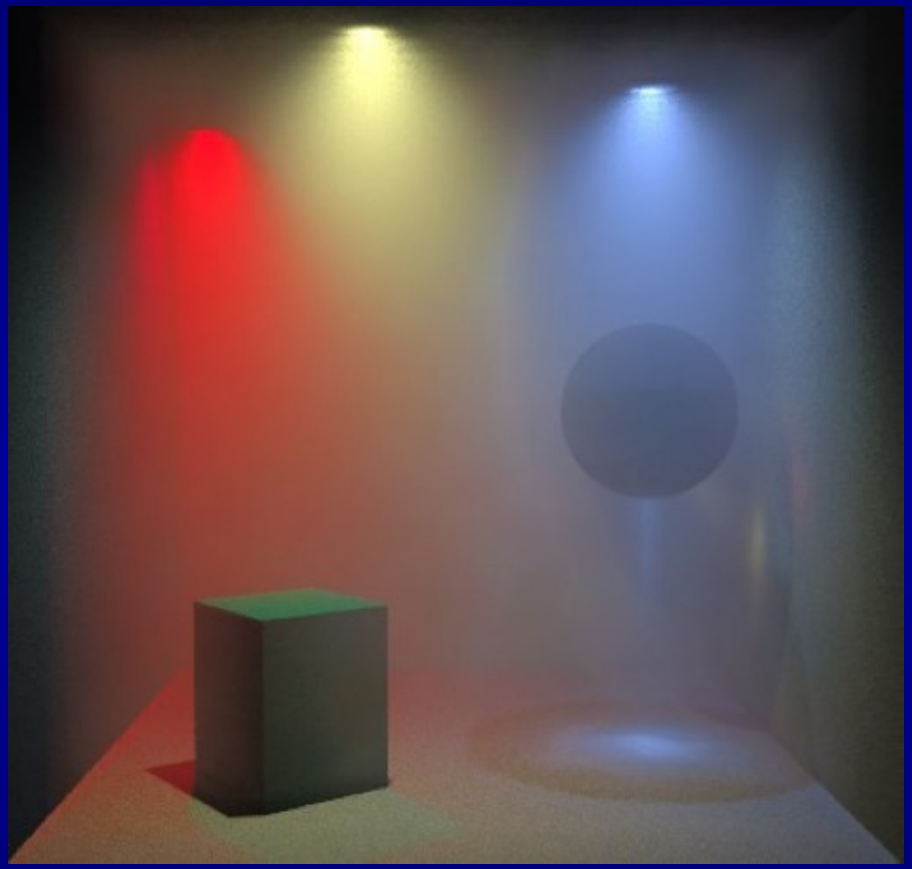

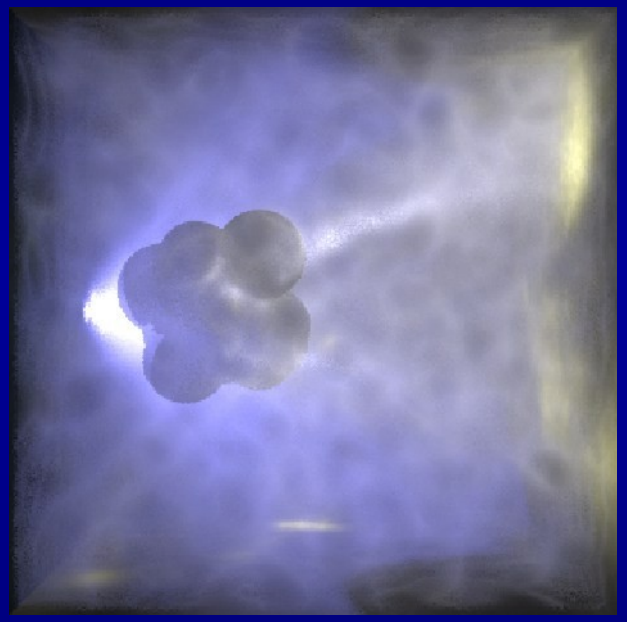

Participating media (F. Anrys, K. vom Berge, 2001)

# Check it out !

# www.renderpark.be

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